

**A<sup>1</sup>** an N type impurity region 41 is formed.

Please replace the paragraph beginning at page 10, line 21, with the following rewritten paragraph:

**A<sup>2</sup>** Subsequently, a well of a photodiode formation portion is formed. Specifically, boron (B) is ion-injected to the whole of a light receiving portion under conditions of, for example, 600 keV and  $3 \times 10^{12}/\text{cm}^2$ , and a P type impurity layer (well) 43 is formed in the semiconductor substrate 10.

Please replace the paragraph beginning at page 10, lines 27, with the following rewritten paragraph:

**A<sup>3</sup>** Thereafter, as shown in Fig. 5C and Fig. 13B, the photodiode formation portion and the P channel MOS transistor formation portion are covered with a resist film 17, and boron (B) is ion-injected to an N channel MOS transistor formation portion under conditions of, for example, 140 keV and  $8 \times 10^{12}/\text{cm}^2$ , and a P well 44 is formed. At the same time, a channel stopper layer 44a of an N channel MOS transistor. Thereafter, the resist film 17 is removed.

Please replace the paragraph beginning at page 11, line 26, with the following rewritten paragraph:

**A<sup>4</sup>** Next, as shown in Fig. 6C and Fig. 14A, a WSi (tungsten silicon) film 21 is grown on the amorphous film 19 to a thickness of 150 nm. Then, the phosphorus (P) is ion-injected under conditions of, for example, 40 keV and  $8 \times 10^{15}/\text{cm}^2$ , thus converting the amorphous silicon film 19 to a low resistance substance.

Please replace the paragraph beginning at page 12, line 12, with the following rewritten paragraph:

*A5*  
Thereafter, as shown in Fig. 7B and Fig. 14C, the amorphous carbon film, the silicon oxide film 22, the WSi film 21, the amorphous silicon film 19 and the silicon oxide film 18 are etched by photolithography, and gate electrodes of the MOS transistors are formed.

[ Please replace the paragraph beginning at page 12, line 17, with the following rewritten paragraph: ]

Next, as shown in Fig. 7C, a resist film 23 having an opening portion is formed in the photodiode formation portion, and then phosphorus (P) is ion-injected to the photodiode formation portion under conditions of, for example, 20 keV and  $4 \times 10^{15}/\text{cm}^2$ , thus forming an N type impurity region 45. Thereafter, the resist film 23 is removed, and a thermal treatment is carried out at a temperature of 1000 °C and for 10 seconds.

Please replace the paragraph beginning at page 12, line 25, with the following rewritten paragraph:

*A6*  
Subsequently, as shown in Fig. 8A and Fig. 15A, a resist film 25 that covers the P channel MOS transistor formation portion and a photodiode formation portion is formed, and phosphorus (P) is ion-injected to both sides of the gate electrode of the N channel MOS transistor formation portion under conditions of, for example, 20 keV and  $4 \times 10^{13}/\text{cm}^2$ , thus, forming a low concentration N type impurity region 46. Thereafter, the resist film 25 is removed.

**Please replace the paragraph beginning at page 14, line 4, with the following rewritten paragraph:**

**A7**  
Subsequently, as shown in Fig. 16B, a resist film 30 that covers a portion other than P channel MOS transistor formation portion is formed, and BF<sub>2</sub> is ion-injected to both sides of the gate electrode of the P channel MOS transistor under conditions of, for example, 20 keV and 3 X 10<sup>15</sup>/cm<sup>2</sup>, thus forming a high concentration P type impurity region 48. Thereafter, the resist film 30 is removed.

**Please replace the paragraph beginning at page 14, lines 12, with the following rewritten paragraph:**

Furthermore, as shown in Fig. 9B and Fig. 16C, a resist film 31 that covers the P channel MOS transistor formation portion is formed, and arsenic (As) is ion-injected to both sides of the gate electrode of the N channel MOS transistor under conditions of, for example, 30 keV and 10<sup>15</sup>/cm<sup>2</sup>, thus forming a high concentration P type impurity region 49. Thereafter, the resist film 31 is removed. Then, the P type channel impurity region 48 and the N type impurity region 49 are activated by performing a thermal treatment at 1000 °C and for 10 seconds. Thus, an N channel MOS transistor and a P channel MOS transistor having an LDD structure are completed. Note that though the drain side of the reset transistor T1 (a side connected to the photodiode) is not formed to the LDD structure, it was confirmed by experiments performed by the inventors of this application that any trouble is not brought about practically even if this side is formed to the LDD structure.